

Class 10

Topics

- Inventory Model
- Canceling Edges
- Machine Failure Model
- Description of Renege Model

Reading

- Consider Round-Robin Scheduling –
Think about how one would formulate it

Inventory Model

State Variables

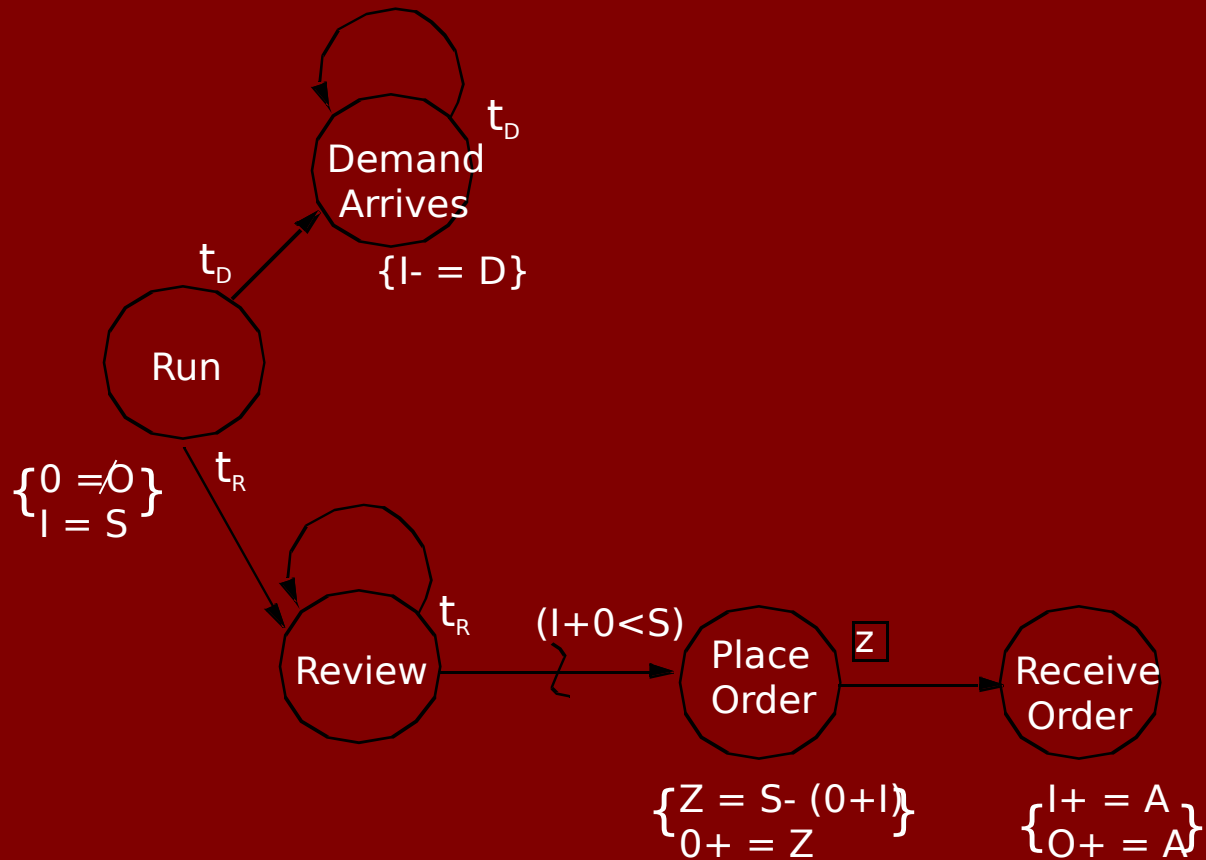
- I = inventory position
= amount on hand - # back-ordered
- O = # on order

Parameters

- D - distance of demand
- t_D - time between demands
- t_{OL} - lead time to receive orders
- t_R - time between ???
- S - amount to “meter up to”
- s - trigger point

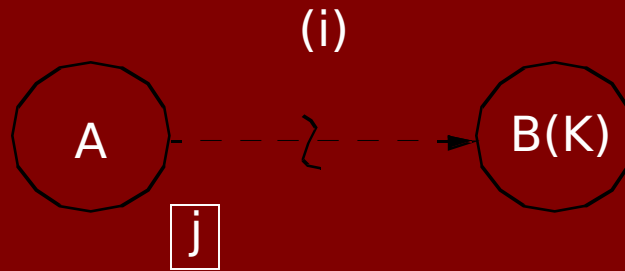
Mode

- $1/T \int_0^T I^+(t) dt$ - inventory costs
- $1/T \int_0^T I^-(t) dt$ - stock-out costs
- $1/T \int_0^T o(t) dt$ - on order costs



Discrete Event Simulation Modeling

Canceling Edge



Note: No time delay.

- If parameter omitted, then none assumed
- If parameter present, expression j must exactly match that of a previously scheduled event in order for a match to occur.

Note: Strict Event Graph methodology does not allow for canceling all matching events.